

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
25 August 2005 (25.08.2005)

PCT

(10) International Publication Number
WO 2005/078051 A1

(51) International Patent Classification⁷: **C10G 11/18**

(21) International Application Number:
PCT/NO2005/000040

(22) International Filing Date: 3 February 2005 (03.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
20040615 11 February 2004 (11.02.2004) NO

(71) Applicant (for all designated States except US): **ELLY-CRACK AS** [NO/NO]; Kleiva 20, N-6900 Florø (NO).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **ELLINGSEN, Olav** [NO/NO]; Kleiva 20, N-6900 Florø (NO).

(74) Agent: **HANSSEN, Kari, O.**; Zacco Norway AS, P.O. Box 765, Sentrum, N-0106 Oslo (NO).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

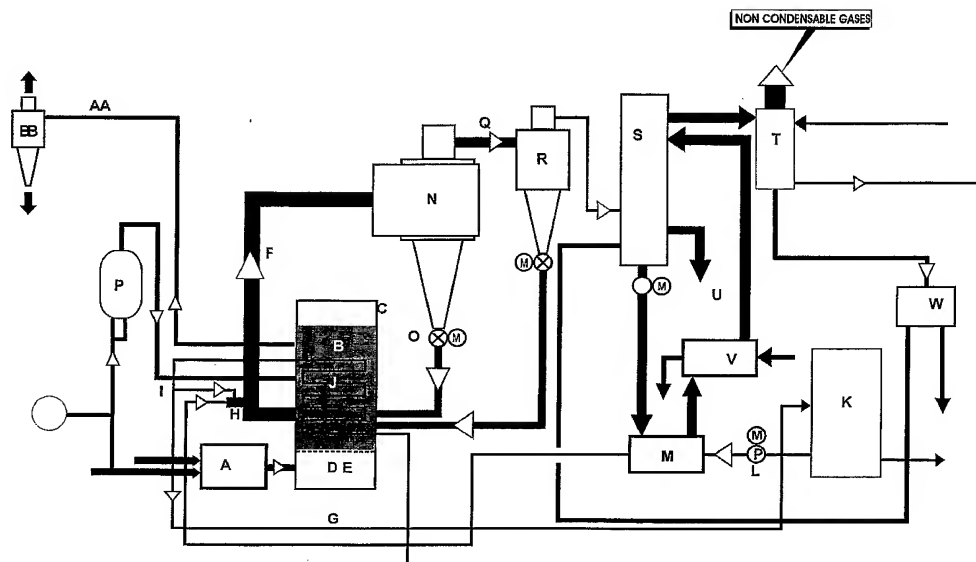
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- with amended claims

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **LOW TEMPERATURE THERMODYNAMIC CRACKING AND CONVERSION FOR UPGRADING OF HEAVY OILS**



(57) Abstract: The present invention provides a thermodynamic cracking process wherein the cracking takes place in a cyclone reactor and in a riser of varying areas under the influence of a rotating and turbulent fluidised energy carrier which is put in motion in a fluidised regenerator by injection of combustion gases or air. A cracking unit is also described.

WO 2005/078051 A1